

Seventeenth Tennessee Water Resources Symposium

Symposium Dates:

April 17-19, 2007

Pre-registration for Symposium:

Before April 12, 2007

Symposium Location and Accommodations:

Montgomery Bell State Park

100 Hotel Avenue

Burns, TN 37029

A block of rooms at the Montgomery Bell Inn and some cabins have been reserved. Inn rooms are \$75, cabins (2 bedrooms) are \$70, and suites are \$180 per night plus tax. When making your reservations, please specify that your room be reserved under "AWRA". For reservations call (615) 797-3101 or (800) 250-8613.

Please reserve lodging by MARCH 30, 2007, to ensure availability and rate.

Directions to park:

For detailed directions to the park, please visit:

http://tnawra.er.usgs.gov/2007/map_dir.html

*****Special Events*****

Golf Tournament. The tournament is scheduled for 7:30 am, April 17. To sign up or for more information, please call Larry Lewis at (731) 234-0360 or email him at larrylewis@taud.org.



Fun Run sponsored by BWSC. A morning jog is scheduled for April 18 at 7am. If you are interested, please call George Garden at (615) 252-4255.

Live Entertainment: Wednesday night.
TN AWRA Talent



Nominations Sought:

Distinguished Service Award

The Tennessee Section of AWRA is seeking nominations for an award to recognize an individual who has made significant contributions to enhance the quality of water resources in Tennessee. Examples of significant contributions include educational contributions towards water resources, scientific advances that improve the understanding of water resources, and several years of dedicated service to the Tennessee Section of AWRA. All nominees must be a past or present member of the Tennessee Section. Remember, if you attended a conference, you were registered as a member!

The Awards Committee will select one candidate from the nominations and will present the award at the annual business meeting held during the 2007 Symposium. Instructions and nomination forms can be downloaded at <http://tnawra.er.usgs.gov/current/DistinguishedServiceAwardForm.pdf>

*All nominations must be received by
March 2, 2007.*

Poster Session

In the Mezzanine on Wednesday afternoon, the Poster Judges will be judging the Student Posters at 3:30 p.m. Everyone else, please be sure to attend the Poster Session at 5:30 p.m. where about 20 posters will be presented.

To encourage student participation, TN Section AWRA awards one student poster with a certificate and cash. If you are not affiliated with a university or a student poster presenter and would like to be a judge, please send email to Anne Choquette at achoq@usgs.gov.

For a listing of this year's poster presenters, please visit:

<http://tnawra.er.usgs.gov/2007/posters.htm>

Sponsors & Exhibitors

Opportunities are still available for your organization to be a sponsor.

New Organizations are now also able to sponsor registrations for nonprofit watershed associations.

For more information, contact Lori Crabtree at (615) 837-4720 or visit: <http://tnawra.er.usgs.gov/2007/exhibitor.html#sponsors>

All exhibitor booths are reserved.

APRIL 17 7:30 am Golf Tournament
 10:00 am Registration in Exhibit Room

Time	Room A: Keynote Speaker		
1:30pm	Dennis McKenna, Deputy Administrator, Illinois Department of Agriculture, Division of Natural Resources: “50 Minutes to Gulf Hypoxia Literacy”		
3:00pm	Coffee Break in Exhibit Room		
	Session 1A (Room A)	Session 1B (Room B)	Session 1C (Room C)
	Nutrients Moderator: Dennis George, TTU	Stream Acidification Moderator: Bruce Robinson/John Schwartz, UT	EDC & Toxic Contaminants Moderator: David Draughon, TDEC, Water Supply
3:30pm	Application of Statistical-Regression Modeled Estimates of Stream Nutrient Loads to Support Nutrient-Management Strategies for Estuaries in the Southeastern US. <i>A. Hoos</i>	In-Situ Bioassays of Native Brook Trout (<i>Salvelinus fontinalis</i>) in Streams Affected by Episodic Acidification in the Great Smoky Mountains National Park. <i>K. Neff</i>	Endocrine Disrupting Chemicals: How do we know whether there is a problem in Tennessee? <i>A. Layton</i>
4:00pm	Modeling Nutrients in an Urbanizing Watershed Using HSPF. <i>J. Hagerman</i>	Long-Term Trends in Water Quality for a High-Elevation Stream in the Great Smoky Mountains National Park: Impacts of Acid Deposition. <i>A. Smith</i>	Expression of Vitellogenin Genes in Fish Following Exposure to Environmental Estrogens. <i>T. Henry</i>
4:30pm	Nutrient Dynamics in Tennessee Reservoirs. <i>S. Qualls</i>	Hydrologic Impacts from a Landslide in the Tennessee Coal Fields. <i>R. Liddle</i>	Innovative Solution for Chlorinated Solvent Bioremediation at the Groundwater-Surfacewater Interface. <i>D. Graves</i>
5-6pm	Vendor Equipment Demonstration Session at the dock behind the hotel restaurant. 6pm Dinner in Room A		

APRIL 18	7:00 am	Fun Run <i>sponsored by Barge Waggoner Sumner & Cannon, Inc.</i>
	7:30 am	Coffee and biscuits in Exhibit Room <i>sponsored by the Ground Water Institute, The University of Memphis</i>
	8:00 am	Registration in Exhibit Room

Time	Session 2A (Room A)	Session 2B (Room B)	Session 2C (Room C)
	Tracers I Moderator: Brian Waldron, GWI	Watershed Studies I Moderator: Jenny Adkins, USDA, NRCS	Engineering Design Moderator: Tom Allen, Neel-Schaffer
8:30am	Estimating Recharge through Fine-Grained Residuum Overlying a Karst Aquifer using Tritium/Helium and CFCs. <i>L. McKay</i>	Watershed Plan Development: Lessons Learned in Beaver Creek. <i>R. Arthur</i>	Evaluation of High Density Polyethylene (HDPE) Pipe Use for TDOT Projects. <i>A. Hangul</i>
9:00am	Use of Tracers and Other Data to Assess Leakage from Nonconnah Creek to the Shallow and Memphis Aquifers in the Vicinity of the Sheahan Well Field, Memphis, Tennessee. <i>D. Larsen</i>	Volunteer Stream Bank Erosion Study: So How Much Sediment Does Bank Erosion Generate? <i>J. McFadden</i>	Engineering Design Methods to Prevent Stream Base Flow Interception by Gravity Sewer Line Construction. <i>R. Martin, B. Griggs</i>
9:30am	Using Decay Series Isotopic Tracers To Develop Conceptual Models Of Aquifer Behavior. <i>R. Gentry</i>	Managing Non-Point Source Pollution at the Landscape-Scale: Experiences from Pond Creek Water Quality Improvement Project 2001 to 2006. <i>F. Walker</i>	Investigating Sediment Retention in Proprietary Stormwater Treatment Devices. <i>J. Dawson, K. Osei</i>
10:00am	Coffee Break in Exhibit Room sponsored by S&ME, Inc.		
10:30am	Tracers II & Ground Water Moderator: Mike Bradley, USGS	Watershed Studies II Moderator: Tom Lawrence, Stormwater Consultant	Water Quality Management Moderator: Rodney Knight, USGS
	Recharge Estimation Using Meteoric Chloride as a Tracer within the Vadose Zone. <i>B. Waldron</i>	HEC-RAS Modeling of Dam Break Scenarios on the Hiwassee River. <i>G. Nail</i>	Derivation of Site-Specific NPDES Permit Limits for Copper. <i>L. Heise</i>
11:00am	Using Ground-Water Age-Dating Samples and Particle Tracking to Test a Conceptual Flow Model of Ground-Water Travel Times from a Landfill to a Spring. <i>C. Haugh</i>	Hydrologic Analysis of the Obed River Watershed, Cumberland Plateau Physiographic Province, Tennessee. <i>G. Law</i>	Continuation of Wadeable Streams Assessment Project in Tennessee. <i>D. Arnwine</i>
11:30am	Evaluation of Multi-Level Monitoring Well Completion Technologies for Karst Dolomite. <i>T. Kafka</i>	Climate Change in East Tennessee or a "Cool" Place to Look for Global Warming - Evaluating Stream Thermal Variation for Protection of East TN Coldwater Fishery Regimes. <i>R. Benfield</i>	Mercury Levels in Tennessee Fish. <i>G. Denton</i>
Noon	Lunch with Speaker: Nicholas Crawford, Center for Karst Studies at Western Kentucky University, "Environmental Problems Associated with Karst Hydrology in Tennessee"		

APRIL 18 (cont) Time	Session 2A (Room A)	Session 2B (Room B)	Session 2C (Room C)
	Tracers III Moderator: Randy Gentry, UT	Urban Watershed Planning I Moderator: Saya Qualls, TDEC, WPC	Restoration I Moderator: Dan Eagar, TDEC, WPC
1:30pm	Injected Tracing Data as Compared with CFC, 3-He/3-H Ages in Conduits in the Floridan Aquifer. <i>G. Davies</i>	Decentralized Wastewater Treatment in Tennessee: Where Are We and Where Are We Going? <i>E. Polk</i>	Pavilion Branch Stream Restoration Project. <i>G. Mryncza</i>
2:00pm	Dual Tracers Used to Evaluate Seepage in a Natural Wetland. <i>D. Graves</i>	Evaluating Management Needs in Water Resources and Spill Response Activities. <i>J. Smith</i>	Pond Creek Levee Setback and Stream Restoration Project. <i>M. Adams</i>
2:30pm	Organic Fluorophores in Drinking Water; Implications for Dye Tracing and Source Characterization. <i>T. Brown</i>	Examining the Impacts of Urbanization on Hydrologic Response for the Ensor Sink Watershed, Cookeville, TN. <i>B. Wells</i>	Restoration of Clinch River and Wallens Bend to Reduce Sediment near Threatened Mussel Shoals. <i>N. Cammack</i>
3:00pm	Coffee Break in Exhibit Room sponsored by UT, Tennessee Water Resources Research Center & Institute for a Secure and Sustainable Environment		
3:30pm	Judges will evaluate student posters in the Mezzanine. Student Poster Presenters will be available to discuss and answer questions about their displayed posters with the judges.		
3:30pm	Tracers IV Moderator: Larry McKay, UT	Urban Watershed Planning II Moderator: Scott Gain, USGS	Restoration II Moderator: Joey Woodard, TSMP
	Design Cost-Effective Tracer Tests to Quantify Surface and Ground Water Flow and Contamination Transport in Karst Areas, Northeastern Tennessee. <i>Y. Gao</i>	Headwaters of the Harpeth River: Water Quality and Habitat Study. <i>J. McFadden</i>	Stream Restoration in West Tennessee – Crooked Creek. <i>A. Kopp</i>
4:00pm	Karst Hydrology and the Interpretation of Negative Results in Tracing Tests: A Theoretical Perspective. <i>W. Zhou</i>	Water Withdrawal ARAP Application. <i>S. Woodward</i>	Marble Springs: Stream Restoration on Governor John Sevier's Homestead. <i>R. Smith</i>
4:30pm	Tracers Open Discussion	Economic Criteria for Regional Water Supply Planning in Tennessee <i>B. Wade</i>	Third Creek Restoration Project Knoxville, Tennessee. <i>A. Bick</i>
5:30pm	Poster Session in the Mezzanine: All Poster Presenters will be available to discuss and to answer questions about their displayed posters.		
6-8pm	Dinner followed by TN AWRA Business Meeting and ♫ ♫ Talent Show ♫ ♫ (Please contact Joey Holland to sign up at 615-687-7020 or joey.holland@state.tn.us)		

APRIL 19 7:30 am Coffee & biscuits in the Exhibit Room

Time	Session 3A (Room A)	Session 3B (Room B)	Session 3C (Room C)
	Hydrologic Requirements of Aquatic Ecosystems I Moderator: Sally Palmer, The Nature Conservancy	Wetlands Moderator: Dennis George, TTU	Stormwater and More Moderator: Anne Hoos, USGS
8:30am	Past, Present, and Future of Instream Flow Assessment Methods. <i>M. Sale</i>	Simazine Removal Using Sphagnum Peatmoss in Mesocosms Simulating Subsurface Flow Constructed Wetlands. <i>K. Stearman</i>	Use of an Innovative Mobile Treatment System for Stormwater Runoff and Dewatering Programs. <i>M. Miller</i>
9:00am	Determination of Hydrologic Requirements of Aquatic Ecosystems in the Tennessee and Cumberland River Watersheds. <i>R. Knight</i>	Sizing and Laying Out a Stormwater Wetland for the Sevenmile Creek Stream Enhancement Project. <i>L. Slate</i>	Gas Chromatography Analysis of Polycyclic Aromatic Hydrocarbons in Sediment and Stormwater Runoff Samples Collected in Murfreesboro, TN. <i>J. DiVincenzo; P. Wilbon</i>
9:30am	Instream Flow Protection in TN: TWRA's New Program Tests Methods for Establishing Flow Criteria. <i>K. Elkin</i>	Monitoring and Modeling the Hydrology of a Forested Sinkhole Wetland on the Tennessee Highland Rim. <i>A. Hill</i>	An Erosion and Sediment Control Strategy for Success. <i>G. Moody</i>
10:00am	Coffee Break in Exhibit Room co-sponsored by Tennessee Stream Mitigation Program		
	Hydrologic Requirements of Aquatic Ecosystems II Moderator: Sally Palmer, The Nature Conservancy	Status Report of Wolf Creek and Center Hill Dams Moderator: Bob Sneed, USACE	Education & Outreach Moderator: Margo Farnsworth, Cumberland River Compact
10:30am	Probabilistic Monitoring of Streams Below Small Impoundments in Tennessee. <i>R. James</i>	Wolf Creek and Center Hill Dam Seepage Project Overview	Waters and Civilizations: Teaching College Students about the Local, Regional, and Global Aspects of Fresh Water. <i>J. Logan</i>
11:00am	Geomorphology & Vegetation of Alluvial Bars in the Obed Wild and Scenic River. <i>B. Wolfe</i>	Wolf Creek and Center Hill Dam Inundation Mapping	Chattanooga Neighborhood Environmental College. <i>M. Rogge</i>
11:30am	Dissolved Oxygen in the Harpeth River: Connecting Point Source, Non-Point Sources, and Water Withdrawals. <i>M. Corn</i>	Wolf Creek and Center Hill Dam Projects: Lessons Learned about Public Education & Involvement	Stormwater: A Dynamic Business. <i>D. Green</i>

Montgomery Bell State Park
Burns, Tennessee
April 17-19, 2007

Sponsored by

Tennessee Section of the American Water
Resources Association

In cooperation with

- * Ground Water Institute, The University of Memphis
- * Neel-Schaffer, Inc.
- * Tennessee Association of Utility Districts
- * Tennessee Department of Environment and Conservation
- * Tennessee Technological University
- * The Nature Conservancy
- * Tom Lawrence, Stormwater Consultant
- * UT, Earth & Planetary Science
- * USDA, Natural Resources Conservation Service
- * U.S. Geological Survey, Water Resources

Also sponsored by

- Barge Waggoner Sumner & Cannon, Inc.
- Center for the Mgmt, Utilization & Protection of Water Resources
- Ground Water Institute The University of Memphis
- Neel-Schaffer, Inc.

Exhibitors

- AMJ/YSI
- Earthscapes
- Eureka Environmental Engineering
- Fuller, Mossbarger, Scott & May Engineering, Inc.
- Geo-Jobe GIS Consulting
- Hydrolab-OTT
- In-Situ, Inc.
- Jen-Hill Construction Materials
- Tom Lawrence, Stormwater Consultant
- LOCHNER
- Mid-TN Erosion
- P.E. LaMoreaux & Assoc.
- Revere Control Systems
- Shamrock Environmental
- Stevens Water Monitoring
- Sutron
- Tennessee Instrumentation Co., Inc.
- U.S. Geological Survey

**Companies both
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- S&ME
- UT, TN Water Resources Research Center/ISSE
- Tennessee Stream Mitigation Program

Symposium Chair

Paul Davis
TDEC, Water Pollution Control
Email: paul.estill.davis@state.tn.us
Tel: (615) 532-0625

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Montgomery Bell
State Park
Burns, TN

KEYNOTE SPEAKER:

Dennis McKenna, Deputy Administrator
Illinois Department of Agriculture
Division of Natural Resources
"50 Minutes to Gulf Hypoxia Literacy"

LUNCHEON SPEAKER:

Nicholas Crawford, Professor and Director
Center for Cave and Karst Studies
Western Kentucky University
Department of Geography and Geology
"Environmental Problems Associated with Karst Hydrology in Tennessee"



Registration and Preliminary Agenda
(ATTN Engineers: Opportunity for PDH's/CEU's)

Tennessee Section AWRA
c/o U.S. Geological Survey, WRD
640 Grassmere Park, Suite 100
Nashville, TN 37211
Address service requested

<http://tnawra.er.usgs.gov>

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Seventeenth Tennessee Water Resources Symposium Pre-Registration Form

Title _____ Mr., Ms., Dr. (circle one)
 Name _____
 Title _____
 Organization _____
 Address _____
 City, State, Zip _____
 Daytime Phone _____
 Email Address _____

___ Vendor Equipment Demo Session

*Please check if you are interested in attending the Vendor Equipment Demonstration Session.
 Space is limited, so reserve your spot early! (see back of this page for more info)*

Type of Registration	Cost per person	Number of registrants	Subtotal
Regular Registration	\$100		
Speaker	\$100		
Professional Poster Presenter	\$100		
Moderator	\$100		
Sub Total			
Discount 10% (if more than 10 \$100 registrations)			
Student Registration*	\$30		
Student Poster Registration*	\$30		
Extra Meals for spouses	\$15		
Grand Total			

Send Registration to:
 TN AWRA
 c/o U.S. Geological Survey
 640 Grassmere Park, #100
 Nashville, TN 37211
 ATTN: Lori R. Crabtree
 Phone: (615) 837-4720
 FAX: (615) 837-4783
 Email: crabtree@usgs.gov

*Student sponsorships are available again this year. If you'd like to be considered for sponsorship, please email Lori Crabtree at crabtree@usgs.gov

Please circle one: Visa Mastercard

Credit Card # _____ Exp. _____

Signature _____

Please print name on card (if different from above): _____

Pre-registration fee is \$100 until April 12, 2007; onsite registration fee is \$120. Student registration is \$30. A 10% discount applies if 10 or more people register from one organization (student registrations are already discounted). Make check payable to "Tennessee AWRA" or "TNAWRA." Visa and Mastercard are also accepted. The registration fee covers the costs for each registrant's copy of the summary of abstracts and the costs for Thursday's lunch, both dinners, coffee breaks, and 2007-8 membership fees. Additional meals may be purchased for spouses for \$15 each.

Mailing address on credit card statement (if different than above):

Addr: _____

City, State: _____

Zip: _____

Additional registrants if at the same address. If addresses differ or if more space is needed, please use a separate piece of paper.

2. Name: _____

Email: _____

Phone: _____

___ Vendor Equipment Demo

3. Name: _____

Email: _____

Phone: _____

___ Vendor Equipment Demo

4. Name: _____

Email: _____

Phone: _____

___ Vendor Equipment Demo

5. Name: _____

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7. Name: _____

Email: _____

Phone: _____

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8. Name: _____

Email: _____

Phone: _____

___ Vendor Equipment Demo

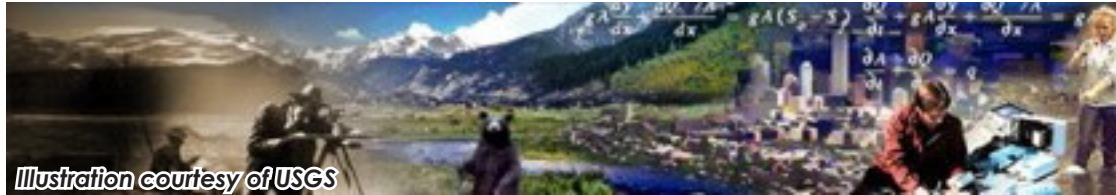
9. Name: _____

Email: _____

Phone: _____

___ Vendor Equipment Demo

Special Sessions



Vendor Equipment Demonstration Session

Where: At the boat dock behind the hotel restaurant
When: April 18, 2007 at 5:00-6:00 p.m.

Vendors will be signing up soon to demonstrate their equipment in the field. Check the following website for vendor information:
<http://tnawra.er.usgs.gov/2007/equipdemo.html>

Please contact the following for more information:
Tom Lawrence
(901) 274-2829
bus@thecave.com

Be sure to sign up on your registration form if you are planning to attend this special session.

Sediment Discussions

Where: Room A
When: April 19, 2007

1:30 p.m.
Validating Regional Geomorphic Curves in Tennessee

2:45 p.m.
Approaches to Stream Restoration